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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,427	07/29/2003	Wendell P. Noble	MI22-2378	7832

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EXAMINER

SCHILLINGER, LAURA M

ART UNIT PAPER NUMBER

2813

DATE MAILED: 06/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/630,427

Applicant(s)

NOBLE, WENDELL P.

Examiner

Laura M Schillinger

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 40-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 40-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/1/</u> | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Double Patenting*

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 40-43 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4 of U.S. Patent No. 6344399.

Although the conflicting claims are not identical, they are not patentably distinct from each other because silicon structures is an obvious variation of "semiconductive material".

Compare claim 1, of US 6344399 to :

Claim 40. A method of forming conductive lines comprising:

forming an oxide isolation grid between silicon structures;

forming conductive material within the oxide isolation grid to form a conductive grid therein', and

removing selected portions of the conductive material grid to define interconnect lines within the oxide isolation grid.

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Compare claim 2, of US 6344399 to :

Claim 41: The method of claim 40 of forming conductive lines of claim 40, wherein forming an oxide isolation grid comprises forming individual oxide isolation regions over a silicon substrate by trench and refill technique.

Compare claim 3, of US 6344399 to :

Claim 42. (new): The method of forming conductive lines of claim 40, wherein forming an oxide isolation grid comprises:  
forming a plurality of silicon-containing islands over an insulative surface, and forming oxide isolation regions between silicon-containing islands.

Compare claim 4, of US 6344399 to :

Claim 43. (new): The method of forming conductive lines of claim 40, wherein forming conductive material within the oxide isolation grid comprises:  
etching into the oxide isolation grid to define a network of outwardly- exposed trenches running within the oxide isolation grid; forming conductive material within and over the outwardly-exposed trenches to a degree sufficient to completely fill the trenches; and planarizing the conductive material to isolate conductive material within the trenches and to define the conductive grid.

***Claim Rejections - 35 USC § 102***

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 40-43 are rejected under 35 U.S.C. 102(b) as being anticipated by Noble ('835).

In reference to claim 40, Noble claims a method comprising:

forming an oxide isolation grid between silicon structures;  
forming conductive material within the oxide isolation grid to form a conductive grid therein', and  
removing selected portions of the conductive material grid to define interconnect lines within the oxide isolation grid(Abs., lines: 9-16).

In reference to claim 41, Nobel teaches the method of claim 40 of forming conductive lines of claim 40, wherein forming an oxide isolation grid comprises forming individual oxide isolation regions over a silicon substrate by trench and refill technique. (Col.9, lines: 25-35).

In reference to claim 42, Nobel teaches the method of forming conductive lines of claim 40, wherein forming an oxide isolation grid comprises:  
forming a plurality of silicon-containing islands over an insulative surface, and forming oxide isolation regions between silicon-containing islands (Col.3, lines: 60-65).

In reference to claim 43, Noble claims wherein forming the conductive grid within the oxide isolation grid comprises:

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Etching into the oxide isolation grid to define a network of outwardly-exposed trenches running within the oxide isolation grid (Col.5, lines: 30-45);

Forming conductive material within and over the outwardly-exposed trenches to a degree sufficient to completely fill the trenches (Col.6, lines: 5-25); and

Planarizing the conductive material to isolate conductive material within the trenches and to define the conductive grid (Col.6, lines: 5-35).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura M Schillinger whose telephone number is (571) 272-1697. The examiner can normally be reached on M-T, R-F 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl W Whitehead, Jr. can be reached on (571) 272-1702. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Laura M. Kelly", followed by a long horizontal flourish.

LMS

6/11/04